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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,426	06/07/2000	Shigefumi Masuda	FUJA 17.393	1115

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KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER	
BELIVEAU, SCOTT E	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/589,426	Applicant(s) MASUDA ET AL.	
	Examiner Scott Beliveau	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 4-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-8* is/are allowed.

6)☒ Claim(s) *2 and 4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2 and 4 have been considered but are moot in view of the new ground(s) of rejection. However, the examiner notes that the incorporation of the limitations wherein the "synchronous detection control" may be "configured as a differential detecting circuit which includes a delay circuit for delaying the upstream signal and a synchronous detector for multiplying the upstream signal with the signal delayed by the delay circuit" as presented in the allowed claims would place the application in condition for allowance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vince et al. (US Pat No. 5,937,330) in view of Kobayashi et al. (US Pat No. 6,160,990).

In consideration of claim 2, the Vince et al. reference discloses an "ingress noise control system" for use in a "cable system" [118] which utilizes different frequency bands for two-way communications (Col 2, Lines 3, Lines 34-44). The system includes an "ingress noise blocking device" [158] residing in the "transmission path" [148/149] comprising a "spectrum detector" [156/256], a "detection controller" [156/256], and a "gate switch" [150/250] so as to "pass the upstream signal" (Col 4, Line 63 – Col 5, Line 33, 46-53).

In operation, the embodiment utilizes a combined "spectrum detector" / "detection controller" [156/256] for "judging whether or not the upstream signal is a valid upstream signal, based on a comparison of the upstream signal level for each of a plurality of distinct predetermined frequencies" (Col 4, Lines 40-51; Col 5, Line 54 – Col 6, Line 6) in addition to the detection of a preamble tone / sequence (Col 5, Lines 26-33). Subsequently, "the gate switch circuit" [150/250] is "turned on . . to pass the valid upstream signal there through only when the upstream signal is judged to be a valid upstream signal" (Col 5, Lines 8-23).

With respect to the limitation pertaining to the "synchronous detection controller", the "detection controller" [156/256] upon detection of a sequence of signals from an upstream signal associated with the set-top terminal [57] is operable to "turn on the gate switch" [150/250] (Col 5, Lines 8-33). The reference, however, does not explicitly equate the detection controller [156/256] as being a "synchronous detection controller". However, the reference discloses that the "detection controller" [156/256] is operable to identify a preamble tone or sequence (Col 5, Lines 26-33; Col 6, Lines 7-31).

The Kobayashi et al. reference discloses a "synchronous detection controller" to be used in conjunction with the detection of a transmission indicator signal (Col 22, Lines 44-63). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to identify the transmission of a set-top terminal [57] when using a "sequence" so as to utilize a "synchronization detection controller" for the purpose of identifying a pattern or sequence of preamble signals in order to distinguish between explicit upstream communication and noise exhibiting a particular frequency so as to improve the reliability of signal detection (Kobayashi et al.: Col 23, Lines 9-15).

Claim 4 is rejected as outlined in the rejection of claim 1 wherein the aforementioned "ingress noise blocking device" [106] comprises a "first" [151] and "second separation filter" [158/258], a "gate switch circuit" [150/250], a "synchronous detection controller" [156/256], and a "spectrum detector" [156/256] which further judges whether or not the upstream signal is a valid signal and "turns on the gate switch circuit only when the upstream signal is judged to be a valid upstream signal".

Allowable Subject Matter

5. Claims 5-8 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

The use of a "detector" in conjunction with a "gate switch circuit" is known in the art as evidenced, for example, by the Sanders et al. reference. Similarly, the use of "synchronous detection circuits" including filters, delay circuits, is also known in the art as illustrated by the Kobayashi et al. reference. It is the examiner's opinion that the art of record, however, is

not necessarily conducive to an obvious design choice modifications to incorporate the aforementioned methods into a single embodiment as the applicant has suggested that the particular configuration wherein the "synchronous detection control" may be "configured as a differential detecting circuit which includes a delay circuit for delaying the upstream signal and a synchronous detector for multiplying the upstream signal with the signal delayed by the delay circuit" is for a particular purpose (Page 11, Lines 5-12). Furthermore, each of the cited systems for blocking ingress noise using a "detector" and a "gate switch circuit" utilizes a means other than a "synchronous detector" which comprises the elements recited in claims 5-8. Subsequently, it would not have been necessarily obvious to one of ordinary skill in the art to modify the cited teachings, as they are operable utilizing a different type/form of detector, and there is no teaching in the cited art to suggest that the disclosed detectors may be readily substituted/combined using other detection means.

Accordingly, in consideration of claims 5 and 6, the art of record does not suggest nor discloses that the broadly construed "synchronous detection circuit" of the Sanders et al. reference further comprises a "differential detection circuit". Furthermore, in consideration of claims 7-8, there is no suggestion or disclosure to suggest that the composition of the "synchronous detection controller" further comprises a "delay circuit", a "synchronous detection circuit", a "low-pass filter", or a "synchronous detection judging unit".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907. The examiner can normally be reached on Monday-Friday from 9:00 a.m. - 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEB
March 30, 2004

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600